

THE ORIGIN
OF THE
VICTORIA BRIDGE

BY THE
HON. JOHN YOUNG.

Printed by:
J. BENTLEY & CO., PRINTERS, 54 NOTRE DAME STREET.

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ROYAL ROYAL YOUNG

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On the 22nd March last, a Special Meeting of the Montreal Board of Trade was held for the purpose of giving the members an opportunity of expressing their opinions as to the necessity of erecting a second bridge across the St. Lawrence, at or near St. Helen's Island. Those in favour of the project had, for some time, contended that the construction of the contemplated "Royal Albert Bridge," the plans of which were produced at the meeting, was evidently demanded for the accommodation of the railways now building from Quebec to Montreal, and from Montreal to Aylmer, north of the St. Lawrence and Ottawa Rivers. During the discussion which ensued, the subject of the Victoria Bridge was introduced by Mr. Thomas Cramp, a portion of whose remarks is thus given in the report of the proceedings, which appeared in the *Montreal Herald* :—

"He (Mr. Cramp) had listened with astonishment to the statements of Mr. Young, which would lead any one to suppose this was the first time the question of bridging the St. Lawrence at this point (St. Helen's Island) had ever come up. In 1846, he could recollect this question was brought up and discussed. Many of those here to-day would remember the establishment of a journal called the *Canadian Economist*, a paper edited by a number of gentlemen for the love of the thing. The paper gave the public a great deal of valuable information. Among these gentlemen was Mr. George Elder, who, with Mr. Young, wrote articles, calling the attention of the people of Montreal and the Dominion to the necessity of establishing a bridge to connect the north and south sides."

The *Herald* report adds that Mr. Cramp denied that Mr. Young was entitled to the honour of being the projecter of the Victoria Bridge, insisting that Sir A. T. Galt, Mr. George Elder and other gentlemen were "as much so as he." He also alluded to the agency of Sir Robert Stephenson in its construction; but awarded to Mr. Thomas C. Keefer the merit of being "the real architect and projecter of the Victoria Bridge."

With the high opinion I have always entertained of him, I feel assured that Mr. Cramp would not wilfully misrepresent the facts of the case to which he thus referred. I can, therefore, only account for the circumstance by considering that, as at the somewhat remote period of which he spoke, he could not, by several years, have attained the legal age of discretion, his knowledge or memory must have been at fault in the matter. Perhaps, however, he might as well have revised his juvenile reminiscences and conclusions before submitting them to so intelligent a body as the commercial community of Montreal. Being quite unprepared for Mr. Cramp's new reading of what is generally regarded as a rather prominent incident in our local history, I confined myself to a denial of his views and statements, there being, indeed, little time to do more. I have since hesitated to enter on the subject, inasmuch as documents and facts, which were once easily accessible, are no longer to be procured without more trouble and labour than I can devote to the task. Still, I have thought that some benefit might be derived by the rising generation from an acquaintance with the struggles and exertions which were required, thirty years ago, and, in some instances, are yet necessary, to initiate and secure any kind of improvement involving a departure from old beaten paths, and progressive in its character and object. I must state, in all sincerity, that it is not from motives merely

personal to myself that I "rush into print," although I imagine I may be excused for feeling some satisfaction, or pride, if people will so term it, in my connection with undertakings which are admitted to be beneficial to the country, if not to my individual interests. Those who accuse me of "pertinacity and obstinacy," might reflect that without the qualities which they denounce by these names—and which more friendly critics might call perseverance and energy—works such as I allude to can seldom be brought to fruition. I conceive, too, that the charges of egotism and vanity, with which I have so frequently been assailed, should, even if well founded, be entitled to charitable consideration, if not to entire absolution. Most of those among us, who have been engaged in public enterprises, have contrived to be paid for their services in more substantial coin than empty praise expressed in the fine words, which are proverbially said to butter no parsnips.

With respect to the contemplated new bridge, which Mr. Cramp told the Board of Trade was calculated to destroy the harbour of Montreal, I may be permitted to observe that, if I believed that its construction would lead to such a consummation, I ought to be found among the most determined opponents of the scheme. I have expended no inconsiderable portion of the best years of my life in aiding to improve our harbour, and the navigation of the St. Lawrence as the ocean route to and from it; and I am accused of a desire to undo this work, partly, at least, my own, and to render useless the money and labour that have been laid out on it. This, it must be confessed, is not very consistent with the other charges brought against me; for most people would suppose that I would be about the last man to damage the harbour of Montreal. But my demand, and that of those who agree with me on the question of the Royal Albert Bridge, is neither

unreasonable nor exorbitant. The opponents of the bridge assert that it would disastrously interfere with the business of the port. Now, let this be proved by ascertained facts and on competent authority, and I and my friends will at once abandon the scheme. But if it be shown that the apprehended danger is visionary, or nearly so, and that the harbour would not be injuriously affected, while this city and the country would be vastly benefitted by the erection of the bridge, then I maintain that it should be built with as little delay as possible. This is surely a fair proposition, and in no other way can a controversy be settled upon which public opinion is so much divided.

I shall, further on, make some observations on the objects and labours of the journal alluded to by Mr. Cramp, but shall, in the meantime, propound the question :—

WHO WAS THE PROJECTOR OF THE FIRST BRIDGE ACROSS THE ST. LAWRENCE ?

Being largely engaged in Western commerce in 1846, and for many years before, I became convinced of the necessity of a connection with the Atlantic by railway. This was urged with much force by the late John A. Poor, Judge Preble and other citizens of Portland; and Sir A. T. Galt and myself made great efforts to commence the St. Lawrence and Atlantic Railway. At the same time, the Hon. L. H. Holton, the late Mr. Ira Gould, Hon. James Ferrier, myself and others obtained a charter to construct a railway from Kingston to Montreal. I was elected President of the Company. It soon became evident that the success of the St. Lawrence and Atlantic, and of the Montreal and Kingston Railways, depended on a continuous connection over the St. Lawrence, so

as to avoid all transshipment. And what I did, and now claim credit for doing, was the suggestion, in 1846, of a site for a bridge over the St. Lawrence, at a point *a little below Nuns' Island*. This suggestion was published in the *Canadian Economist*, No. 8, on the 20th of June, 1846, in an editorial of that paper written by me, as follows:—

“BRIDGE ACROSS THE ST. LAWRENCE.

“The engineers of the Portland Railway are now actively engaged in finding out the best route between the St. Lawrence and the Provincial line. So far, the levels have been found very satisfactory, and it has been decided the track shall pass by St. Hyacinthe, and from thence up the St. Francis to Sherbrooke; but where is the terminus on the St. Lawrence to be? Montreal is not alone interested in this question. The supplies of the New England States from the Western States and Western Canada, of provisions, cereals, lumber, &c., are large; and it will depend on the economy of transport and the facility of doing business at Montreal, whether produce shall go east by this route, or by the railways of the United States. If the terminus is made at Longueuil, as suggested, that will be below St. Helen's Island. Long wharves, owing to the shallowness of the water, will have to be constructed, to enable the interior freight vessels, drawing 8 feet of water, to reach the railway cars. Ferry boats will be required to convey freight and passengers across the river, and a natural result will be that a large part of the business will be done across the river, where, in the course of time, a second Brooklyn would spring up. A still greater objection, however, is, that at the very time we require a railway most to carry off the surplus produce left on hand, all communication is closed—we mean in the Spring and Fall—at which time crossing for a number of days is impossible, and, for a time, only at Lachine—how, then, is the difficulty to be got over? We reply, *by building a bridge across the St. Lawrence*. This is no visionary scheme. We speak without any doubt when we say that it is perfectly practicable. Such a bridge can be erected from this side, *a little below Nuns' Island*, at which part of the river the water is quite shallow, and the shoving of the ice nothing like so violent as lower down the river. By means of such a bridge, we should have constant access to the opposite shore, to the great convenience of the trade of the interior, and a large revenue would be obtained from foot passengers, and by the passage of the cattle, carts and horses, of the country people. It may be objected that such a bridge would obstruct navigation; but masted vessels, with car-

"goes, would prefer the canal; and as for steamers, a hinge on the
 "funnel could be made, as on the Rhone and Seine in France, by
 "which means the bridges are easily passed. This is a work for
 "the people of Montreal to move in; every man that owns a foot of
 "property should give it his attention and support, if upon a sur-
 "vey and examination by competent engineers, it is found as
 "practicable as we now, with full confidence, represent that it will
 "be."

Now, what I have always maintained is, that the above proposal for a bridge across the St. Lawrence, at a little below Nuns' Island, or where the Victoria Bridge now stands, was then made for the first time, and had never before been suggested by any one. I have never claimed any credit for the proposed bridge from the north bank of the St. Lawrence to St. Helen's Island, or Isle Ronde. Schemes emanating from various correspondents in the newspapers, from 1832 to 1843, advocated a tunnel from Craig Street to St. Helen's Island, and a suspension bridge of sufficient altitude to allow vessels to pass under it. These projects I have always deemed impracticable; but when the time has now come that a bridge to accommodate the North Shore trade has become a necessity, the plan of Mr. Legge has met my entire approval. I think either a tunnel or a suspension bridge at that point almost an impossibility. In my bridge article in the *Economist*, neither Mr. Elder, Sir A. T. Galt, nor any one else, had any participation. The project was the source of much ridicule, and the papers of the day teemed with letters showing its absurdity and the dangers to be apprehended from its construction. Messrs. Elder, Galt, Holton and many more were friendly to the enterprise, but took no active part in it at that time. I believed in its necessity for the railway interests of the St. Lawrence Valley, and was unceasing in my efforts to promote it.

In the 20th number of the *Economist*, 12th Septem-

ber, 1846, three months after the publication of my first article, I wrote an editorial as follows:—

"BRIDGE ACROSS THE ST. LAWRENCE.

"Twenty years ago, the project of a bridge across the St. Lawrence, to connect the Island of Montreal with the mainland, would have been scouted as absurd and impracticable. Even twenty months ago, there were few, even amongst our most energetic and enterprising citizens, who bestowed a thought on the subject, or dreamed that such a thing was possible.

"Yet such, we trust, will prove to be the case. Every day the project is gaining ground as feasible and highly important for the interests of the city. Already many of our wealthy citizens are willing to assist in carrying it into execution, and are anxious to see some public action taken in its behalf. The initiative only requires to be taken, and, looking at what has been so energetically done in reference to the Portland Road, we have no doubt there is sufficient public spirit to bring the project fairly before the public. If there is to be no bridge, then the terminus of the Portland Railway must be at Longueuil instead of in the city. No proprietor of real estate would wish to see Montreal translated to the opposite bank of the river; we, therefore, bid our landed proprietors to beware and to look to this matter ere it be too late."

On the 23rd September, 1846, eleven days later than the above, I brought the subject under the consideration of the Directors of the St. Lawrence and Atlantic Railway, of which Lord, Sir A. T. Galt and myself were Directors. I moved, seconded by Mr. Galt,

"That this Board do hereby authorize the Company's Engineer, Mr. Morton, to cause a survey to be made of the proposed bridge across the St. Lawrence, for the purpose of ascertaining its practicability, and an approximate estimate thereof." This resolution was much opposed, and principally on the ground that such a work was impossible and dangerous for the city from the shoving of the ice; still it was carried by a small majority.

Mr. Morton made a superficial survey, not incurring much expense, and gave it as his opinion that a bridge

was practicable below Nuns' Island, but gave no plans nor estimate of its cost.

My next move was to call a meeting of those whom I knew to be friendly to the project. This meeting was held late in September, 1846, and is referred to as follows in the *Economist* :—

“BRIDGE ACROSS THE ST. LAWRENCE.”

“At a meeting of those interested in the construction of a bridge across the St. Lawrence, held a few days ago, Messrs. David Davidson, Bourrett, Hayes, Pierce, Stephens, Young and Henry Judah, were chosen a Committee to make all the necessary arrangements for the commencement of this important work. At a subsequent meeting of the Committee, John Young, Esq., was nominated Chairman; D. Davidson, Esq., Treasurer, and Henry Judah, Secretary. We understand that a gentleman of eminence in bridge building has been sent for to the United States, and that a sufficient fund will be formed to defray all preliminary surveys. At present, nothing but the miserable feeling ‘that there is no hope for us,’ would make the community tolerate the inconvenience and loss resulting from want of proper means of communication with the opposite shore. Longueuil is as difficult of access as though it were a dozen miles away; and, during a large part of the day, communication is cut off altogether. Farmers and others are frequently obliged to wait an hour before their turn comes to be taken across. In short, the more this project of a bridge is thought of, the more important it becomes, and the deeper interest will be taken in it. We rejoice, therefore, it is in such good hands, and wish the Committee every success, and the public will acknowledge the debt they owe to those who urge it forward.”

The result of this meeting was the appointment of Mr. Gay, of Philadelphia, in 1846, who sounded the channel and river in various places, and reported in December following, in favour of a line extending “about half a mile above the foot of Nuns' Island, across the main channel, to the house occupied by Charles Mayo.”

Mr. Gay surveyed a line still higher up, about one-fourth of a mile below the head of Nuns' Island, towards Laprairie, but which he rejected. At the same time, he reported against any bridge being constructed

with safety "*below Nuns' Island.*" His idea of the bridge was, that it would be used both for railways and common travel, and that "it would be highly advantageous for Montreal and the Province."

Mr. Morton's line was about a fourth of a mile below the site recommended by Mr. Gay, and near the foot of the Island, which he considered objectionable. It intersects the eastern main shore, about 4,500 feet below his line.

Mr. Gzouski, C.E., gave his opinion of the bridge in 1849, and in favour of its practicability. That gentleman was employed by me, in my capacity of President of the Montreal and Kingston Railway, to make a survey of that work in 1851; and he referred to the importance of the railway, as Montreal is, perhaps, the only place where a connection by bridge will be made.

In 1852, the Montreal and Kingston Railway Company desiring a more detailed survey of the line, employed Mr. T. C. Keefer, C.E., on this duty; and, believing in the value that would be given to the Railway by a bridge across the St. Lawrence, they gave Mr. Keefer instructions, through me as President, to make a plan and estimates for a bridge across the St. Lawrence: "from a supposed terminus on the St. Gabriel Farm, at or near the first basin above Wellington Street Bridge, on the Lachine Canal, and continuing your survey of the road from the opposite bank of the St. Lawrence to the best point of intersection with the Portland Railway."

Some time in 1852, Mr. Keefer made his report, which was afterwards published in pamphlet form by the Montreal and Kingston Railway Company, with a map. As stated by me in a letter to the *Montreal Gazette*, of 8th August, 1859:—"This very able report of

Mr. Keefer's, on the bridge, did much to place the whole project fairly before the Canadian public as to its being quite practicable."

Now, as to Mr. Cramp's statement, "that he claimed for Keefer the honour of being the real architect and projector of the bridge."

I have shewn that, in 1846, six years before Mr. Keefer had any connection with the bridge question, I pointed out the necessity, for the commerce of the city and country, that a bridge should be constructed, and suggested for it the site "a little below Nuns' Island." The detailed statement of the various surveys during those six years, were brought about by my incessant perseverance, and mostly at my expense, or on my responsibility. When very few thought the subject worth attention, I continued toiling on with the one object; but until employed by me in 1851, Mr. Keefer had no connection whatever with the bridge, nor did he ever, that I know of, make any claim of being its projector. To enable Mr. Keefer to go on with the survey, I obtained \$6,000, on my security, from the St. Lawrence and Atlantic Railway, afterwards assumed by the Grand Trunk Company. This Mr. Keefer found insufficient, and I borrowed \$600 from the Harbour Trust also on my security, which Mr. Cramp will find was paid in 1853, with interest on the 3rd July, amounting to \$652. This, with \$1,276.32, was contributed by myself and others to finish the surveys; and part of Mr. Keefer's drafts on me for the latter amount I have still in my possession. Mr. Keefer's account against the Montreal and Kingston Company was \$2,000, "for estimates for the bridge, according to the instructions of the Hon. John Young, President M. & K. Railway, dated 3rd June, 1851, said survey extending to 20th June, 1852, besides \$1,000 for shewing Alex. M. Ross, Esq., the line of railway in June, July and August,

1852." As a further proof that Mr. Keefer never denied me the credit of being the projector of the bridge, he says in a letter to me, dated February 17th, 1853 :—" It is evident we shall now have the bridge ; but what a great compliment to your foresight."

In an editorial of the *Toronto Leader*, in 1859, on the Victoria Bridge, written, I believe, by Mr. W. Kingsford, C.E., it is stated :—

" The trade which before the days of railways had hurried by the Ottawa and St. Lawrence to Montreal, passed through the State of New York to its commercial capital. In this position of affairs, the mercantile community of Montreal projected the St. Lawrence and Atlantic Railway, which was one record of difficulties and trials, which at the time seemed desperate, and which indeed were only conquered by invincible determination and unceasing energy. This was begun, and even if the Western road from Montreal was completed, it was evident that so far as commerce was concerned, the St. Lawrence would be divided into two parts. Then arose the question, can the St. Lawrence be bridged? Although doubtless there were many who speculated on the possibility of bridging and tunnelling the St. Lawrence at Montreal, it is conceded that the merit of having first recognized its commercial necessity must be affiliated to the Hon. John Young. He urged it, in private and public, with all the earnestness of his nature, as a work not for Montreal only, but for the whole country. This was in 1846. The Free Trade parties in Montreal were then battling for the dissemination of their views, and in the *Canadian Economist*, edited by Wm. H. Fleet, a name affectionately remembered by all who knew him, appeared a remarkable article on the necessity of a bridge, and suggesting a point for its construction, different from any other which had ever been named. In this paper the first notice of the design appeared, and we are aware this article was written by the Hon. John Young. We are particular in referring to this, for it now seems to be a generally recognized principle, that the discoverer of a new fact, or the propounder of a new law, must be regarded to be he who makes the discovery public. The necessity of these remarks may not be apparent to all, but they are put on paper to establish the truth. What energy Montreal, as a community, possessed, was absorbed in the effort to finish the railway to the ocean. The bridge was looked at as a mere crotchet, and an impossibility, and it was not till 1852 it came permanently before the public."

From a work published in 1859, "A Glance at the Victoria Bridge," dedicated, by permission, to the Grand Trunk Railway, and written by Mr. Charles Legge, C.E., I shall make a few extracts. After referring to the difficulties which the projectors of new works, thirty years ago, had to contend with, it is stated :—

"We cannot sufficiently admire the spirit which impelled these early projectors to adhere to their convictions as to the magnitude of the works required, and which the experience of a few years has demonstrated to be correct. It was under such circumstances, and with those objects in view, that the canals were built, and the inland waters lighted up from Gaspe to Goderich, enabling her to enter into competition as a public carrier of the produce of the West.

"The St. Lawrence and Atlantic Railway, leading from Montreal to Portland, was projected and begun; but depression in trade deferred the commencement of the Western line. During this period of stagnation, however, a question was raised of the greatest importance to the whole system of future extension—we refer to the project of bridging the St. Lawrence, with the view of a continuous line from one end to the other. The conception of an idea so bold and original, and, to many, apparently impossible as this, was met with ridicule and laughter, and was set down by the public as the production of a man who had taken leave of his senses, and was scouted accordingly. Fortunately for the Province, the author of this mad scheme was the Hon. John Young, whose whole mind was full of patriotism and advancing the interests of Canada; and who, believing he was correct, held on to his idea with all the pertinacity and determination of the Scotsman. Ultimately he triumphed over all opposition, and in time, by his powerful arguments in the newspapers, and on 'Change, before the Railway Board, and in public assemblies, brought many to see as he did."

After alluding to Mr. Morton's and to Mr. Gay's surveys, the latter an Engineer appointed by the Committee of Citizens previously referred to, and to the fact of a charter for the bridge having passed the House of Assembly in 1847, which was rejected by the Legislative Council, in consequence of numerous petitions from Montreal, the writer goes on to say :—

"With so unfavourable a result to all the efforts which had been made by the projector for carrying out this great idea, it

" would naturally be supposed he would allow the subject to drop as an impracticability, and take no further action in the matter. An eminent engineer, selected by himself, had pronounced a bridge below Nuns' Island a physical impossibility, which he in turn knew full well was, in his opinion, a wrong one. He brooded over the matter, and every day became more and more convinced of its commercial importance, and stronger in faith that it would be accomplished."

In the *Canadian Tourist* of 1859, it is stated in reference to the bridge, that

" Now it is our pleasure, as we believe it to be our imperative duty to inform the reader, that to a distinguished merchant, the Hon. John Young, belongs the merit of having first recognized, agitated and urged the commercial necessity of the Victoria Bridge where it now stands, to connect the railway systems on both sides of the St. Lawrence, and with which his name will always be associated."

When the Victoria Bridge was completed, Mr. James Hodges, engineer to Messrs. Peto, Brassey & Betts, contractors for the bridge, published, in London, a magnificent work, in two volumes, showing all the plans of the piers, the machinery used, &c., &c. This work, was, with permission, dedicated to the Prince of Wales, after the opening of the bridge, by His Royal Highness, in 1859. On page 4, it is stated, and has never been contradicted, that,

" As early as 1846, the Hon. John Young, of Montreal, suggested the practicability and absolute necessity of a bridge across the St. Lawrence, near Montreal, and he succeeded in obtaining surveys and reports upon the subject from several eminent engineers—from Mr. Morton in 1846, Mr. Gay in 1847, Mr. Gzouski in 1849, and Mr. T. O. Keefer in 1851, with which and the information he obtained on the spot, Mr. Ross, on his return to England, designed the structure upon the principle on which it is carried out, and upon which the provisional contract was taken, and, as Engineer-in-Chief of the Grand Trunk Railway, afterwards resided in Canada until the works were completed."

Mr. Cramp, at the Quarterly Meeting of the Board of Trade, condescended to say that Mr. Young's record in connection with the bridge was highly honourable, &c., but that Sir A. T. Galt and Mr. George Elder were

equally connected with its early history. Both of the gentlemen named were always friendly to the project, and Sir Alex. Galt seconded my resolution, in 1846, to have Mr. Morton, the Engineer of the St. Lawrence Railway, to make a survey. But neither of them ever took any active part in the enterprise, nor claimed any credit as its projectors. Mr. Elder wrote a dialogue in reference to the meeting of the St. Lawrence and Atlantic Directors, which appeared in the *Economist*, satirizing certain persons for their views in opposition to the bridge. The Hon. Mr. Holton was always a consistent friend of the project, advanced money to help surveys, and did whatever he could to assist me in my design.

On the occasion of the Victoria Bridge being opened by His Royal Highness the Prince of Wales. Sir Edmund Head, the Governor-General, sent for me, and I was introduced to the Prince as the original projector of the bridge. So the Board of Trade and the public can judge from the facts stated, what amount of credit is due to the opinions of Mr. Cramp now in 1876, when the statements made from 1846 to 1860 were never contradicted. And if Mr. Cramp, or any one else, can even now show that the present site for the Victoria Bridge was ever pointed out previously to my article in June, 1846, published in the *Economist*, let that be done; but until Mr. Cramp raised doubts on a subject of which he personally was ignorant, no one has yet attempted to do so.

Now as to Mr. Cramp's assertion, that Mr. T. C. Keefer was "the real architect and projector of the bridge," his allusion to "the labours of Sir Robert Stephenson in the matter," and that to project a bridge was a very different thing from building it. These statements of Mr. Cramp before the Board of Trade are

so erroneous, as well as unjust to others, that I deem it a duty to take notice of them.

I have already stated that in June, 1851, Mr. T. C. Keefer was employed by me, as President of the Montreal and Kingston Railway, to make a survey of the line to Kingston, and with instructions, at the same time, "to make plans and estimates for a " bridge across the St. Lawrence at such point as you " may deem best, starting from a supposed terminus " on the St. Gabriel Farm, or near the first basin " above Wellington Bridge, on the Lachine Canal, and " continuing your survey of the road from the opposite " bank of the St. Lawrence to the best point of intersection with the Portland Railway." This report, consequently prepared by Mr. Keefer, was, as I expressed in a letter to the *Montreal Gazette*, in August, 1859, "very able, and put the subject of the bridge first fairly before the public in Canada, and did much in directing attention to it, and to its being carried out." But while this was correct, yet the bridge, as designed by Mr. Keefer, is not the same as the present bridge either in

SITE,

PIERS,

OR

SUPERSTRUCTURE,

and the plan of the present bridge, the selection of the site, the form of the piers, and the superstructure were mainly due to the late Alexander M. Ross, Chief Engineer of the Grand Trunk Railway, whose name was not even once mentioned by Mr. Cramp—a further evidence of his lack of knowledge on the subject.

THE SITE

advocated by Mr. Keefer for his bridge is on the south shore, 4,200 feet below the present structure, and 2,130 feet below it on the north shore.

THE PIERS.

According to Mr. Keefer's Report, his plan contemplated the planting of very large "cribs," or wooden "shoes," covering an area of about one-fourth of an acre each, and leaving a clear passage between them of 240 feet. "These islands" of timber and stone will have a rectangular well left open in the middle of their width toward their lower ends, out of which will rise the solid masonry towers supporting the height of the superstructure."

Mr. Ross differed from Mr. Keefer in his plan, and it is necessary, to a correct understanding of this most important change made by Mr. Ross, to give an extract from his letter to Mr. Stephenson, then joint engineer with him, dated November 30th, 1855. In arguing against Mr. Keefer's ice-breakers, he observes: "You will also perceive that those one-quarter acre islands would occupy 25 per cent of the water breadth of the river, one of the most prominent reasons for their abandonment when first considered. The space occupied by the piers as now being executed is only seven per cent. This is a most important feature in the relative merits of the two modes of construction. * * * * I mention those facts which our experience has brought to light, as an additional reason why we should not resort to such an objectionable mode of construction. I believe no man capable of instituting a comparison, and with these facts before him, will for one moment hesitate to give the preference to the ice-breakers now being executed, their more permanent efficiency founded in every instance upon the solid rock, placed beyond the reach exerted by the currents, together with their immunity from accidents (not requiring repairs of any kind), a light in which the other mode can never be regarded, and on the scale of merit far beyond the

temporary mode suggested as the substitute on grounds which are altogether untenable."

The superstructure, as recommended by Mr. Keefer, was that of a wooden bridge, with the exception of one span of 400 feet, by an iron tube; and, of course, his arrangement is entirely different from the bridge as now built.

Amid all the excitement that then existed about railways, and the efforts made by the Canadian Ministry to get the Imperial Government to give a guarantee in aid of our Trunk Railways, appeared the celebrated railway letter of Sir Francis Hincks, addressed to Sir John Packington, closing abruptly all negotiations with the Imperial authorities. An agreement was subsequently made with the firm of Peto, Jackson, Brassey & Betts, to build the road with a capital of \$60,000,000. Mr. Alex. M. Ross, their Chief Engineer, came at once to Canada. He had been associated with the Stephensons, and was justly regarded as their right-hand man, and one of the most competent men in England to be entrusted with such a vast undertaking. He had been connected with the Conway and Menai Straits Bridges, and with other extensive works, and was, *par excellence*, considered a bridge engineer.

On his arrival in Canada, he was placed in communication by the Government with the Chief Commissioner of Public Works, which office I then filled. The day following his arrival, Mr. Ross and I went to Montreal from Quebec, and no time was lost in showing him the sites for the proposed bridge, and, as mentioned by me some years ago, "Mr. Ross pointed out the site of the bridge, and that it should be a beam bridge of iron." In the printed account of the bridge already referred to, it is stated:—"Prior to the formation of the Grand Trunk Railway Company, a charter had been granted

to a Company consisting of Messrs. Young, Galt, Holton and others, with the view of constructing a railway to Kingston, to which reference has been made. A difficulty arose from bringing this section under the control of the Grand Trunk Company. Before this period, Mr. Young had resigned his position as President of the Company; but was, at this juncture, applied to for advice by his late *confreres*, as to what course should be pursued. That gentleman, adhering to his purpose of years, advised the surrender of the charter, provided that the Grand Trunk Railway Company would undertake the construction of the bridge. This advice was conveyed by Mr. Young, then Commissioner of Public Works, to Mr. Holton, the President of the Montreal and Kingston Railway Company, who replied as follows:—

“MONTREAL, 16th September, 1852.

“To the HON. JOHN YOUNG, M.P.,

“*Chief Commissioner of Public Works,*

“QUEBEC.

“SIR,

“Upon my return from Quebec this day, I lost no time in communicating to the Committee of the Montreal and Kingston Railway Company the substance of your suggestion relative to the connection of the proposed bridge across the St. Lawrence at Montreal with the western railroads; and I am authorized to say, for the information of the Government, that in view of the very great advantages to be derived from the construction of the bridge to the Province at large, by securing an unbroken communication with the Atlantic sea-board, and having especial reference to the manifest

importance of the City of Montreal, of connecting it with the south shore; believing, also, it would be difficult for the Company which I represent to undertake, under existing circumstances, the immediate construction of this bridge, in addition to the Railway to Kingston, we shall be disposed to waive our rights under our charter whenever the Government shall inform us that they are in possession of proposals which they are prepared to recommend to Parliament for adoption, providing for the simultaneous construction of railroad and bridge of the most substantial character."

After this the work of the bridge became intimately connected with the Grand Trunk enterprise, and orders were given to Mr. Samuel Keefer, C.E., to ascertain if any improvement could be made on a site for the bridge to that previously adopted by his brother Mr. T. C. Keefer. Most extensive soundings were made during the winter months of 1852, and an elaborate chart of the River St. Lawrence at Montreal was prepared; and from these surveys and soundings, a new line was suggested about 2,200 feet above Mr. T. C. Keefer's line on the north side, and 4,200 feet above on the south side. Mr. Ross spent the winter of 1853 in England, and, as Mr. Hodges states, "Mr. Ross, on his return to England, "designed the structure upon the principle on which "it is carried out, and upon which the provisional contract was taken." On the return of Mr. Ross from England in the Spring of 1853, Mr. Samuel Keefer's new line of soundings was adopted by Mr. Ross, which shortens the distance, and differed from all previous lines, by being at right angles with the axis of the river.

From the great eminence of Sir Robert Stephenson in his profession, and from his success in the Britannia Bridge across the Menai Straits, the Directors naturally

looked to him for advice, and he considered the subject of so much importance, that he determined to proceed to Canada, where he arrived at the end of the summer of 1853. After an examination, he publicly declared his opinion that a bridge across the St. Lawrence was practicable, and he afterwards, in May following, so reported to the Directors. No doubt it was Mr. Stephenson's experience and professional reputation that induced the Company to undertake the construction of the bridge, and he could not have satisfied the Company without first satisfying himself. Mr. Ross did not occupy the prominent position before the English public that Sir R. Stephenson did; and although, as Mr. Hodges says, he designed the bridge when he was in England, and made alterations in the site after he returned to Canada in 1853, there is no doubt that the bridge so designed by Mr. Ross, and on the site where it now stands, was that on which Sir R. Stephenson had to pronounce an opinion, was that which he endorsed, and, with some few alterations, joined with Mr. Ross as joint Engineer in risking his reputation and experience for its accomplishment. In proof of this, and that Stephenson never claimed the credit of suggesting or originating an iron tube bridge over the St. Lawrence, the columns of the *Montreal Gazette* will shew that at the public dinner given to him by the citizens of Montreal, on the 19th of August, 1853, he said: "I cannot sit down without referring to the all-important subject of a bridge over your magnificent river. Abundance of information was brought to me by my much esteemed friend Ross, during his last visit to England, so I was able to get a good notion of what the bridge was to be before I came out here. The first idea was certainly rather startling. I had been here some twenty-five years before, and the St. Lawrence seemed to me like the sea, and I certainly never thought of bridging it. I assure you I appreciate

your kindness most deeply, and one of the proudest days of my life will be that when I was called on to confer with the engineers of the Grand Trunk Railway on bridging the St. Lawrence."

Nothing, therefore, can be more evident than that the late Alexander M. Ross was the man who planned the present bridge. Sir R. Stephenson here says that it was his friend Ross who placed before him abundant information. He it was who collected all the information about the breaking up of the ice, &c., and made his own observations as to the river during winter. In 1859, a pamphlet was printed in London, entitled "The Victoria St. Lawrence Bridge," in which the whole credit of constructing and designing it is there claimed for the late Sir R. Stephenson:—"Canada owes the bridge to one mind—the mind of Robert Stephenson." Scarcely a word is said of Mr. Ross, and not once is the name of Mr. Keefer referred to. Knowing all the facts in the matter, I wrote a letter to the London *Times*, denying over my own signature the statements made in the pamphlet, which was written by Geo. R. Stephenson, a nephew of Sir Robert. I wrote also, at the same time, a letter, dated 27th October, 1859, to the *Montreal Gazette*, in which are the words:—"It is not for the purpose of detracting in the slightest degree from the well known fame of the late lamented Stephenson that I now address you, but to do justice to the living, and that it is an error to say that he was the designer and planner of the Victoria Bridge. The honour of this is due to Mr. Alex. M. Ross, the Chief Engineer.

Mr. Ross was a proud, high-spirited gentleman, and naturally looked forward to a recognition of the great work he had accomplished by some mark of honour to him, and he felt the blow thus aimed at him very deeply; and he never got over it.

His feeling on the matter will be apparent from the following letter he addressed to me:—

" MONTREAL, 22nd Oct., 1859.

" MY DEAR SIR,

" You will have been furnished, I have no doubt, with pamphlets and newspapers in reference to the Victoria Bridge and my position in connection with it. These it appears emanate from Mr. Stephenson's office in London; the last unprovoked and virulent assault is signed Geo. R. Stephenson, on the plea of its being approved and sanctioned by Mr. Stephenson. This, I am firmly convinced, is quite untrue, for he would not sanction or approve of so cowardly an attack. I have at length written to Mr. Stephenson upon this subject, but I much fear his state of health, as reported to us in the newspapers, is such as will preclude his taking that part in this business which the circumstances render necessary on my account.

" Indeed it is very doubtful if he will ever see my letter, and it will be the object of those who conspire against me to keep it from his view on any pretext. In any event a short statement from you, stating your recollection of what took place when the then proposed site for the bridge was examined by me at your request, early in July, 1852, may be made to serve a good purpose in my behalf.

" I shall not affect any apology for thus troubling you; I feel that the circumstances, as lately brought under your notice, will amply excuse this trespass upon you.

" And, I am,

" My dear Sir,

" Yours very truly,

" ALEX. M. ROSS.

" To the Honbl. John Young,

" Montreal."

News of the death of Sir Robert was received here in five days after the date of the above letter, so that poor Ross never received any redress for what he deemed a great injustice. He never recovered from the effects of this treatment. His mind gave way, and he had to become an inmate of an asylum in England, where he died.

Other names of those who assisted in every way they could to the construction of the bridge might be mentioned, among which are those of the late Hon. John Ross, Sir Francis Hincks, and the Hon. L. H. Holton. But next to Alex. M. Ross stands James Hodges, agent for Messrs. Peto, Brassey & Co., under whose management the work was prosecuted with great energy and ability, and whose name is dear to all who knew him.

I have never denied to Mr. Keefer the fullest measure of credit. The result of his reports, the surveys for which he could not have made unless I had furnished the means, attracted, when published, the public attention which it deserved. He laid down the principle, that the piers should be as few in number as practicable; but although admitting the advantages of iron over wood, his preference was for wood, except for one span. His ice-piers for the protection of the bridge, and his covering of the piers with timber "cribs," and the form and size of the piers were all discarded by Mr. Ross, who also adopted a different line.

The members of the Board of Trade and the public can now judge whether I did or did not first suggest the position for the bridge "a little below Nuns' Island," and point out its commercial necessity. In doing this, I had no communication with Mr. Elder, Sir A. T. Galt, or others. They, after the suggestion had been made, agreed with me in my views. I carried on and

kept the bridge in view for six years after this, without any connection with Mr. Keefer. It will be for Mr. Cramp, therefore, to prove that these assertions are wrong, and in face of these statements I have made, that to Mr. Thomas Keefer belongs the honour "of being the real architect and projector of the bridge," a claim I never knew Mr. Keefer to make.

I have, perhaps, dwelt at too much length on this matter of the Victoria Bridge and my connection with it; but it seemed to me that Mr. Cramp's bold assertions before the members of the Board of Trade rendered it necessary that I should refer to them, both as well on my own account as to furnish those younger than I am, with facts which might otherwise soon be forgotten. As statements have been made, officially and otherwise, in reference to the origin of the ocean mail steamers trading between Liverpool and the St. Lawrence, which I know to be contrary to the facts, I shall, as soon as possible, give my version of the subject. It will also be useful as a matter of history, to give a brief account of the deepening of the River St. Lawrence between Quebec and Montreal; a work on which the progress of Montreal has greatly depended, and by which the commerce of the country has been greatly promoted.

THE CANADIAN ECONOMIST.

This journal, according to Mr. Cramp, "was edited by a number of gentlemen, for the love of the thing."

Prior to 1846 the people of Canada enjoyed in the markets of the mother country certain advantages for their products based on the old Protective system. But, on the other hand, they had to pay differential duties if they employed a foreign ship, or imported foreign goods except through a British warehouse. Nor could Canadian produce be sent to England in any but British vessels. A foreign ship, in short, could not be employed

at all except on conditions that were virtually prohibitory. The United States had not then passed the Draw back or Bonding Act, allowing Canadian produce and foreign merchandise to pass through in bond. Hence, the Upper Canada trade was confined to the single route of the St. Lawrence, at all seasons, and under whatever circumstances. The exports of our neighbors sent to Britain were not admitted there at the same rate of duties as from Canada; but even that boon was about to be lost to us.

Such was the position of affairs when the discussion of the changes in the commercial policy of the empire, inaugurated by Sir Robert Peel, had commenced, whereby corn and food-stuffs of all kinds were to be admitted free into the United Kingdom, and the navigation laws so altered as to allow merchants full liberty in the employment of either foreign or British shipping. This would create an entire revolution in trade; and here in Canada, in the other colonies, and in Britain as well, the innovation was generally deemed fraught with disaster.

Under these circumstances a number of persons, most of them young men engaged in business, met together in this city to consider the subject. A large majority of them rejoiced in the change that was about to be effected. They organized themselves into an association, of which they elected me President. We issued an address to the people of Canada on the situation, and did much to instil the belief that although at first there would be suffering and loss from the new order of things, yet that the result would be favorable to all. At the first meeting of the Association it was resolved that we should have an organ of our own, advocating free trade principles, and the *Canadian Economist* was started. All of us wrote more or less in the paper, but I may state here that Mr. George Elder only contributed

three articles, one of which was in relation to the bridge, as I have already mentioned. The labor of collecting facts at that period was great; and instead of publishing the *Economist* as a sort of pleasant recreation, as Mr. Cramp seems to imply, it was done at an important era in our history, when few but those practically conversant with trade could have explained the consequences of the commercial changes about to take place, and how to meet them. Perhaps the cost of the paper, which was considerable, divided among so few, was also indulged in "for the love of the thing." We were the objects of all kinds of abuse and misrepresentations on account of our opinions, and much wit and ridicule were directed against the "Philosophers of St. Sacramento Street," as our opponents were pleased to style us.

But there were some who boldly supported us, and among these was Sir Francis Hincks, then editor of the *Montreal Pilot*. In the issue of that paper of the 27th June, 1846, he wrote:—

"What, then, do these young men, the Free Traders of the *Economist*, aim at? Let the Canadian people understand; let their revilers meet them with arguments if they are able. They desire that the carrying trade of the St. Lawrence should be thrown open to the world, so that by lessening the cost of freight, the cities of Quebec and Montreal may be enabled to have a chance to compete with New York for the trade of the West. They desire the abolishment of Imperial duties, under which the Canadian consumer is taxed 15 per cent. on every £100 of glass, and three farthings on all the sugar he consumes, and in like proportion on all imported goods. Such are some of the objects of these men, who are so basely reviled by the anonymous correspondents of the *Gazette* and *Courier*. If the majority of the merchants of Montreal are opposed to such views, then it only proves that they are greatly ignorant of the true interests of the country, and more especially of their own. The young men conducting the *Economist* and the Free Trade Association have only come forward when the success of the new scheme in England was beyond a doubt, and to advocate measures to save the Province from impending ruin. Such are the facts, and we defy any of the opponents of those measures to combat them with argument."

The late Hon. Robert Baldwin, in a speech delivered at Dundas, in 1846, in alluding to the *Economist* and its objects, said, among other things:—

“ But what he should feel bound to contend for was, that the
 “ farmers of the country were not, on the one hand, to be deprived
 “ of the advantages of differential duties in their favour in the
 “ markets of Great Britain, and, on the other, be saddled with such
 “ duties for the mere advancement of the separate interests of any
 “ other class of the community, either in the Parent State or the
 “ Colony itself. Let no one, therefore, persuade us to exhaust our
 “ energies in any attempt of the kind to which he referred; but let
 “ us learn to depend on ourselves. Let us shake off the imbecility
 “ of childhood, and stand erect like men, and he felt assured that
 “ Canada would be found fully equal to the emergency.”

I quote these extracts to show that in the eyes of those most capable of forming a judgment of its merits, the *Economist* was a journal engaged in the greatest work of the time, and that its conductors did much to shape popular opinion on the new commercial policy of England, and its influence on this and the other Colonies. And since Mr. Cramp recollects so well the doings of 1846 and 1847, he should know that the difficulties and enmities which had then to be met, could only have been encountered from a grave sense of duty, and not “for the love of the thing.” However, I ought, perhaps, to thank him for having given me the opportunity of making good my claim of being the projector of the first bridge across the St. Lawrence, near where it now stands, of defining Mr. Keefer's position in connection with it, and of proving the right of my able and lamented friend, the late Alex. M. Ross, to be regarded as the “real architect and designer” of the Victoria Bridge.

Some persons, I repeat, may object that I enter too largely on this subject, and give it undue importance. I cannot, of course, agree with those who think so. If a man like Robert Stephenson declared that one of the proudest incidents of his life was his “being called upon

to confer with the Engineers of the Grand Trunk Railway in bridging the St. Lawrence ; " and if Alex. M. Ross valued the same honor so highly that the attempt to deprive him of it sent him to an early grave, I ought not to be blamed for indulging a kindred sentiment. When one has given years of time, thought, and exertion to any enterprise, it is not pleasant to be told that his efforts have been wasted, or to be classed with or below others who have only expended their idle or unemployed moments on the work. If I err in this view of the case, I at least err in good company.

JOHN YOUNG.

MONTREAL, July, 1876.

